

STATE OF MICHIGAN

DEPARTMENT OF ENVIRONMENTAL QUALITY LANSING



DAN WYANT DIRECTOR

April 4, 2011

Mr. Bruce F. Zimmerman, Director of Public Works City of Mackinac Island Wastewater Treatment Plant 3134 Stone Cliffe Road Mackinac Island, Michigan 49757

Dear Mr. Zimmerman:

SUBJECT: Septage Receiving Facility Operating Plan Approval for City of Mackinac Island

Wastewater Treatment Plant

The Department of Environmental Quality (DEQ), Resource Management Division (RMD), has completed the review of the City of Mackinac Island (Mackinac Island) Wastewater Treatment Plant (Plant) Septage Waste Operating Plan (Operating Plan.) The Operating Plan is approved and meets the requirements outlined in Section 11715b of Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

The Mackinac Island Plant approved Operating Plan will be posted on the Septage Program Web site and can be viewed at http://www.michigan.gov/septage by clicking the "Approved Septage Waste Receiving Facility Operating Plans" link.

The receiving facility must operate in accordance with the approved operating plan. If a change in operations or conditions is anticipated, please file an amendment to the operating plan at least thirty (30) days prior to the proposed date for implementation.

Thank you for your continued environmental stewardship and service to those with on-site wastewater systems in and around your community and those who service them. If you have any questions regarding this matter, please contact me via e-mail at burutolue@michigan.gov; at either of the telephone numbers listed below; or DEQ, P.O. Box 30241, Lansing, Michigan 48909-7741.

Sincerely,

Ebi Burutolu, Soil Scientist On-Site Wastewater Unit

Solid Waste and Land Application Section Resource Management Division

Lansing-Phone: 517-241-4598 Warren-Phone: 586-753-3773

cc: Mr. Nick Derusha, Luce-Mackinac-Alger-Schoolcraft District

Mr. Steven Casey, DEQ-Upper Peninsula District Office

February 1, 2011 Project No. G080509SRP

Luce, Mackinac, Alger, Schoolcraft District Health Department Mackinac County Regional Office 749 Hombach Street St. Ignace, MI 49781

RE: CITY OF MACKINAC ISLAND WASTEWATER TREATMENT PLANT (WWTP)
SEPTAGE RECEIVING FACILITY OPERATING PLAN
LETTER OF NOTIFICATION

This letter of notification is being sent on behalf of Mr. Bruce Zimmerman of the City of Mackinac Island (City) Department of Public Works. To continue accepting hauled septage waste for treatment at the WWTP, the City is required by the Michigan Department of Natural Resources and Environment (MDNRE) to develop a Septage Receiving Facility Operating Plan. This Operating Plan describes the conditions under which the WWTP will accept hauled domestic septage for treatment; the Plan will be submitted to the MDNRE for approval.

The Operating Plan is available for review during normal business hours at the Mackinac Island City Hall, located at 7358 Market Street, Mackinac Island, Michigan. Written comments may be submitted to Mr. Zimmerman, Director of Public Works, City of Mackinac Island, P.O. Box 515, Mackinac Island, MI 49757, and will be accepted for consideration for up to 30 days following this listed date of notification.

If you have any questions or require additional information, please contact me at 248-324-1582 or ehszczegielniak@ftch.com.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

Ew Szczago

Erin H. Szczegielniak

dmg By U.S. Mail

Mr. Bruce Zimmerman - City of Mackinac Island (by e-mail)

engineers scientists architects constructors

39255 Country Club Dr.
Suite B-25
Farmington Hills, Mi
48331
ph: 248.324.2090
fax: 248.324,0930
www.flch.com



February 1, 2011 Project No. G080509SRP

City of Mackinac Island P.O. Box 455 Mackinac Island, MI 49757

RE: CITY OF MACKINAC ISLAND WASTEWATER TREATMENT PLANT (WWTP)
SEPTAGE RECEIVING FACILITY OPERATING PLAN
LETTER OF NOTIFICATION

This letter of notification is being sent on behalf of Mr. Bruce Zimmerman of the City of Mackinac Island (City) Department of Public Works. To continue accepting hauled septage waste for treatment at the WWTP, the City is required by the Michigan Department of Natural Resources and Environment (MDNRE) to develop a Septage Receiving Facility Operating Plan. This Operating Plan describes the conditions under which the WWTP will accept hauled domestic septage for treatment; the Plan will be submitted to the MDNRE for approval.

The Operating Plan is available for review during normal business hours at the Mackinac Island City Hall, located at 7358 Market Street, Mackinac Island, Michigan. Written comments may be submitted to Mr. Zimmerman, Director of Public Works, City of Mackinac Island, P.O. Box 515, Mackinac Island, MI 49757, and will be accepted for consideration for up to 30 days following this listed date of notification.

If you have any questions or require additional information, please contact me at 248-324-1582 or ehszczegielniak@ftch.com.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

Ew Szyago

Erin H. Szczegielniak

dmg By U.S. Mail

cc: Mr. Bruce Zimmerman - City of Mackinac Island (by e-mail)

engineers scientists architects constructors

39255 Country Club Dr.
Suite B-25
Farmington Hills, MI
48331
ph: 248.324.2090
fax: 248.324.0930
www.ftch.con





Septage Waste Receiving Facility Operating Plan

City of Mackinac Island Project No. G080509SRP March 23, 2011

Table of Contents

1.0	INTRODUCTION	• '	
2.0	APPLICABILITY		
3.0	SERVICE AREA		
4.0	FACILITY LOCATION	. 2	
5.0	HOURS OF OPERATION	2	
6.0	SEPTAGE VOLUME RESTRICTIONS	2	
7.0	FEE STRUCTURE	3	
8.0	INVOICING	3	
9.0	SEPTAGE RECEIVING PROCEDURE 9.1 Acceptance Procedure 9.2 Unloading Procedure	3	
10.0	GENERAL PROHIBITED DISCHARGES	3	
11.0	PUBLIC NOTICE	4	

1.0 Introduction

Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 117), regulates the pumping, disposal, and land application of septage waste. To comply with Part 117, a septage receiving facility must develop a Septage Receiving Facility Operating Plan.

2.0 Applicability

A septage receiving facility, as defined by Part 117, as amended, includes a wastewater treatment plant (WWTP) that accepts septage. The Mackinac Island WWTP is currently a receiving facility of septage and will continue to be a receiving facility; therefore, the Mackinac Island WWTP has developed and adopted this Septage Receiving Facility Operating Plan.

Only domestic and food establishment septage is accepted at the Mackinac Island WWTP. For this Operating Plan, domestic septage is defined as the sanitary septic waste pumped from residential or commercial (i.e., hotel) septic tanks only.

J:\080509SRP\REPT\TM_MI_SRP_2011_0323.DOCX

City of Mackinac Island - Septage Receiving Facility Operating Plan Page 2 March 23, 2011

3.0 Service Area

The service area is the whole of Mackinac Island, which is approximately 3.8 square miles. (Hauled septage waste may not be transported on to, or off of, the Island due to transportation limitations. Therefore the service area is smaller than the maximum allowable twenty-five mile radius for most WWTPs.)

4.0 Facility Location

4.1 WWTP LOCATION

The Mackinac Island WWTP is located at 3134 Stone Cliffe Road, Mackinac Island, Michigan, as illustrated in Figure 1.

4.2 SEPTAGE RECEIVING FACLITY LOCATION

The Mackinac Island WWTP headworks serves as the Septage Receiving Facility. Septage is offloaded into the equalization basin prior to grit removal, as indicated in Figure 2.

4.3 FACILITY CONTACT

To schedule a septage delivery, please contact the Mackinac Island WWTP at 906-847-3278. To discuss this Operating Plan, please contact Mr. Bruce F. Zimmerman, Director of Public Works, at 906-847-6130.

5.0 Hours of Operation

Regular delivery of all septage to the Mackinac Island WWTP shall occur only during the fall season (September 15 through October 31), and must be scheduled in advance for delivery between Monday and Friday during the hours of 8 a.m. to 12 p.m. Exceptions are made on an as-needed-basis and special appointments may be made throughout the year to deliver smaller septage loads (e.g., in servicing a single residential tank). There are no deliveries on holidays.

6.0 Septage Volume Restrictions

Due to the unique nature of Mackinac Island as a major seasonal tourist site, the Department of Public Works currently makes arrangements for residential septic tanks in need of pumping to be serviced in the fall, typically during the month of October. This restricts septage loading to the Mackinac Island WWTP to after the peak tourist season is over and prior to winterizing major portions of the WWTP.

Considering these circumstances, the allowable septage volume per day was calculated based on 1) the full WWTP design capacity; 2) a 10% safety factor; 3) average background hydraulic flows and organic loads typical for the Mackinac Island WWTP during the month of October; and 4) assumed septage characteristics (i.e., milligrams per liter of five-day biochemical oxygen demand, total suspended solids, phosphorus, and ammonia as nitrogen). Assumed septage characteristics were based on data from the Michigan Department of Natural Resources and Environment (MDNRE) or site specific data, whichever was more conservative. As presented in Table 1, the controlling design parameter is total suspended solids.

Based on the Mackinac Island WWTP's design capacity for total suspended solids, it can accept up to thirteen thousand (13,000) gallons of septage per day. Delivery volumes are recorded by WWTP operating staff. If the daily limit is met, no additional deliveries will be accepted unless authorized by the Mackinac Island Department of Public Works.



City of Mackinac Island - Septage Receiving Facility Operating Plan Page 3 March 23, 2011

Acceptance of septage waste is contingent upon acceptable plant operation and effluent discharge quality. In the interest of protecting the treatment processes and preventing plant overload, the Department of Public Works reserves the right to refuse any septage waste without advanced notice.

7.0 Fee Structure

The current charge to offload septage to the Mackinac Island WWTP is \$70 per thousand gallons. Fees are subject to change without notice. Please contact the Mackinac Island Department of Public Works to verify these fees.

8.0 Invoicing --

Septage haulers shall establish an account with the Department of Public Works. The information required for invoicing will be updated as necessary. Upon arrival at the Mackinac Island WWTP, staff records the nominal volume of the septage hauling truck and the number of deliveries the truck makes. Septage delivery records are forwarded to the Department of Public Works for review. The Department of Public Works totalizes the thousands of gallons discharged by each hauler and invoices accordingly.

Any septage hauler failing to compensate the Department of Public Works within 30 days of the invoice date may lose service privileges with the Mackinac Island WWTP.

9.0 Septage Receiving Procedure

9.1 ACCEPTANCE PROCEDURE

Due to the very limited accessibility of septage hauling trucks to Mackinac Island, there is no formal application or permitting process to authorize a hauler to discharge to the WWTP. Septage haulers must have a valid, current Septage License from the MDNRE.

9.2 UNLOADING PROCEDURE

At an appointed time, a hauler may arrive at the Mackinac Island WWTP to deliver and offload septage waste. Mackinac Island WWTP operating staff records the date, time, hauling company, and thousands of gallons to be discharged.

The septage truck will be directed by WWTP staff to pull up outside the WWTP headworks. A quick-connect (cam lock) on the northwest side of the headworks building allows a truck to unload the septage through a 4-inch hose and down-turned elbow directing into the equalization basin inside the headworks building. Unloaded septage drains out of the basin to mix with the influent wastewater stream and passes through the aerated grit chamber for preliminary treatment.

10.0 General Prohibited Discharges

Septage haulers shall deliver only domestic sanitary septage and food establishment septage to the Mackinac Island WWTP. Unacceptable wastes include, but are not limited to, portable toilet waste, grease trap waste, and any chemically compromised septage of suspected illicit origin. (Recreational vehicles are not permitted on Mackinac Island and therefore are not of concern.)



City of Mackinac Island - Septage Receiving Facility Operating Plan Page 4 March 23, 2011

11.0 Public Notice

The enclosed public notice was published weekly in the local newspaper, *St. Ignace News*, on February 16, 2011. The comment period was open through March 18, 2011. No written comments were received.

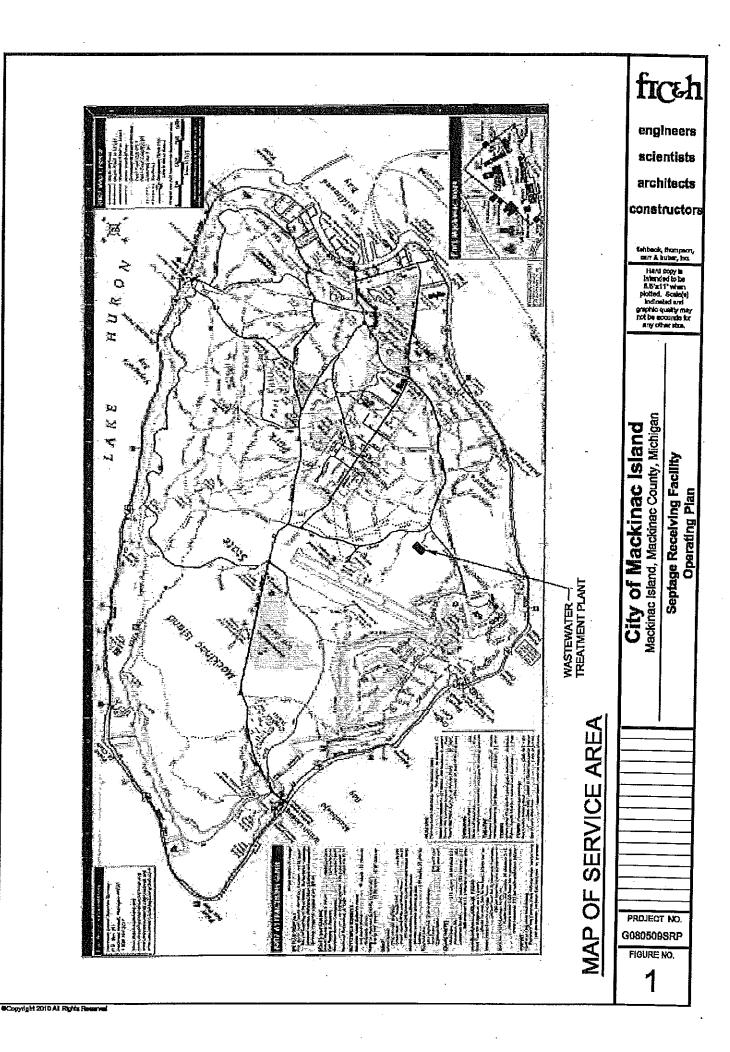
The two Letters of Notification (attached) were sent to the following authorities of the service area on February 1, 2011.

- Luce, Mackinac, Alger, Schoolcraft District Health Department Mackinac County Regional Office.
- City of Mackinac Island.

The corresponding comment period was open for 30 days. No written comments were received.

Attachments:

- ☑ Figure 1 Map of Service Location
- ☑ Figure 2 Septage Receiving Facility Location Map
- ☑ Table 1 Calculations for Septage Capacity
- ☑ Public Notice Publication
- ☑ Letter of Notification to LMAS District Health Department
- ☑ Letter of Notification to City of Mackinac Island



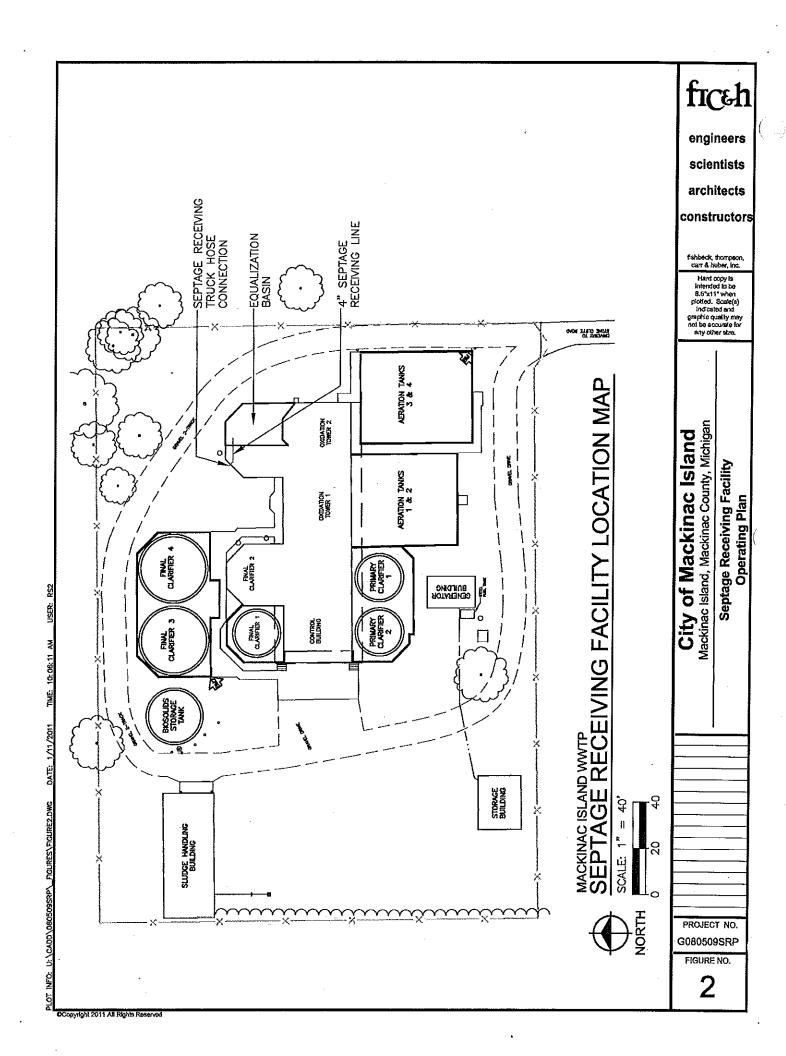


Table 1: City of Mackinac Island WWTP - Septage Capacity

1. WWTP Basis of Design		
Avg Day Flow	0.96	MGD
Concentrations		
BOD ₅	750	mg/L
TSS	650	mg/L
Phos	6.2	mg/L
NH ₃	30	mg/L
Loadings		
BOD₅	6003	lb/day
TSS	5202	lb/day
Phos	50	lb/day
NH ₃	240	lb/day

2. Safety Fac	10%	
Loadings		
BOD₅	600.3	lb/day
TSS	520.2	lb/day
Phos	5.0	lb/day
NH ₃	24.0	lb/day

3. Background (5-yr avg for Oct)			
Avg Day Flow	0.437	MGD	
Concentrations			
BOD ₅	188	mg/L	
TSS	208	mg/L	
Phos	4.5	mg/L	
NH ₃	24.5	mg/L	
	21 - 21 - 22 - 23 - 24 - 25 - 24 - 25 - 24 - 25 - 25 - 25	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Loadings			
BOD ₅	684.9	lb/day	
TSS	757.8	lb/day	
Phos	16.4	lb/day	
NH ₃	89.3	lb/day	

4. Septage	4. Septage		
Available WWTP Capacity			
BOD₅	4717	lb/day	
TSS	3924	lb/day	
Phos .	28.3	lb/day	
NH ₃	127	lb/day	
Assumed	Septage	Concentrations	
BOD ₅	6500	mg/L	
TSS	34,000	mg/L	
Phos	210	mg/L	
NH ₃	. 164	mg/L	
	20 20 20 20 20 20 20 20 20 20 20 20 20 2	0	
Equivalent	t Septage	Volume	
BOD₅	87,053	gpd	
TSS	13,844	gpd	
Phos	16,144	gpd	
NH ₃	92,765	gpd	

5. Allowab	le Septag	je Volume
13,000	gpd	(TSS controlled)

Abbreviations:

BOD₅ five day biochemical oxygen demand

gpd gallons per day

lb/day pound(s) per day

MGD million gallons per day

mg/L milligrams per liter

NH₃ ammonia as nitrogen Phos total phosphorus TSS total suspended solids

THE ST. ICANAGE NEWS

Mackinac Island: From page 22

"Wigs for Ella to do, and friends on Mackinac Island are proud of her

The next mone night at Irmity Church will be Womesday, Febru-ary 16. The movie wiff be "The Solvist," staring Jamie Foxx and Robert, Downey, 'F. She pothet. starts at 6 p.m. and the movie will be shown at 7 p.m. Everyone is wel come to attend

Congratulations to Megan and Eddie McNulty of Adrian on the birth, of their daugher. Paymo Grace, som Fridas, Formars'4 She weighed / pounds 5 offices arbirth Proted grandparents are Marti Melnand measured 20 inches in lengt

tire and Dan Winkel, and great-grandmother is Margaret Mefritre. Paria Starkweather celebrated then Best wishes from Island ferenck

Mackinac Island

John Kissane entertamed folks ar orthiday February 2. Fransure your day was special

a Valentine s Day concert Sunday Referency 18 at 7 pm at Set Ames Church

came

everyone had on their visit to Mackinate Island in early Decem-Liv Schoenborn celebrated ther fifth brithday with farmly and briends at the Village inn Wechesday evening, February 2. A great time was enjoyed by all

Happy birthday to Pat Andress be Thursday, Eebrian, 17, at the The Mark Gallagher dimen will Fridas osemig, Februar, 4. me., to play başketbili. Mademia island Lakers celemated. Happy bribday, no Part Andro Homecoming With the Beaver island. February 16 stajiny yom day. coming Queen, Marie Biniker and Islanders Congramitations to Home-

come and enjoy good food and help even yone to remember a wonderful young man in the Desember edition of the utility of Gazene, there were was enjoyed by all following the

nes of Maxima. Friends may re-member than with at hithligh, card at the following address [11] Country shire Court Kingspore [5] in Kingsport, Jermessee Dr. Solomon wastine Island doctor for Dr. Jöseph Solomon, will cele brate his 80° birthday February 21 Thears and has went frond memo-

ber when the two schools gathered

great photographs of Mackinec and articles about the wonderful hime gramitations to the Mackinac, family on Mackinac

Home coming King Austin Ruddle. Community Hall, All proceeds will past weekend and are enjoying time. The Lakens gills and boys were now benefit the Mank Gallagher Schole at their home in Noodbluff.

Our one and a home coming dance archip Fined at the Mackings Gland. Jennier. Bloswick, general manarship Emol at the Mackenae Island — Jennifer. Blownes, general mar-Communion, Foundation. Please—ager of Grand Houl, her been re-

By Jear

Christy May of Pefoskey has been toyed a recent weekend vising Beoley Simmons of St. 1gnace en Cardy Surrhand Girilly

Season in Steamboat Springs, Col

cruting employees for the 200

Traverse City has been visiting the plays for mass at Ste. Anne.'s. Mixe. Shockley's mother, Jan. o is the missic teacher at the Mackins Island Public School, Heather ats visiting her daughter, Heather, wh

Rechmission a medical mission.

who are undefeated and are the to Hordmas for a week. We wast Islandi akur gurs baskebali team,

Hawetha Behavioral Health is accepting bids for lability insurance. Bid specifications are available by contacting posteric Praft, Contracts and Procediment Continuation at 1905, 94 122144. Bids must be received no later than 5:00 p.m. on Tuesday, March 1,r201

Hawatha Behavidral Health Attn: Insurance Bid 125 North Lake Street Matristique, Mr. 49854 Please send bids to

BOILON OITENA Mackinac Island

Department of Public Works

The Mackinals Island Wastewater Treatment Plant has developed a ceots natiled septage waste acopy of this plan is available for review at City, Hall, 7358 Warket Street, Mackinac, sland sperween 8/a m. and afthe following address: Macdinae Island Departmentor Rublic Works. P.O. Box 515: Wacdinae, Island: WII 4975... Septage Receiving Facility Operating: Plan as required because It ac 4.3.Tm.: W-F-1Witten comments will be accepted untill Wageful 18:2011

0.22	MANAGAR	in more and
nal Prop		
T T	88888	888888
上海等于	Harris State	on the state of the state of
2.55 (a)		
2 To 18		
Person Ratio %	1.0395 59.90 F.0700 E0.00 1.0700 E0.00 1.0700 E0.00 1.0700 E0.00 1.0700 E0.00	
Seate Care		00000000000000000000000000000000000000
	0000000	000000
44.	លេកបរិសាស លា សេសប	արարարա
1.425	7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000	
4 2 M 2 5 H	11.0000 11.0000 11.0000 11.0000 11.0000 11.0000	
多数 医 流动	する さんきゅう	
* SE 192 B	이렇다 아무 뭐다	
100 E 110	代联想与对策	THE PARTY OF
		1 41 44
(1) · · · · · · · · · · · · · · · · · · ·		企业的建立 。
	80000000	566666
20 O TO	eddaana.	
	150.00 15	888888 888888
R. Contract	7. March 2018	R. UZIK A POSED
2 P		19 大观似9 9
ed by P(A 165, 1971 Timber Cutover Developmental Batto % Fector Ratio % Factor	1.12.1. 50.00 1.00.00 [F0.00] 0.82.6 30.00 1.00(2) 50.00 1.03.6 50.00 1.00(2) 50.00 1.03.6 50.00 1.00(2) 50.00 1.03.6 50.00 1.00(2) 50.00 1.03.6 50.00 1.00(2) 50.00	1.0800 50.00 0.9701 50.00 0.000 50.00 0.000 50.00 0.000 50.00
24 A	000000	
A 11		HOMEFF
34.3	1000	1.5
		位置自由
ed by P Timber Ratto	4666666	86 85 781
3.7. E E	0000000	第二名第日 名
3.7 号 序		លៈលាលការ លំខា
\$ 1	1 50 30 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	COLOR DESCRIPTION
as requirements		
第二章 第		
ished as negu Residential Iaflo % Factor	4 7 2 2 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	6000000
- 20 E 1		
2 3 3	。 	
经 企图 经 图	# (C) # (C) # (C)	OWNER
分。 CC 制。	STREET, NO. 50 No.	തത്ത്ത്ത്
blished Resid	4.000004.000000	0.4.000.4.0
Published Region	全部制度等情况	
克里 。泛 言 :	多多数其形像多	19 の意をもで
是是不是	555YXXX	9806, 59.97 845.97, 49.84 8009, 944.28 6300, 5632 0000, 48.98 997.6 52.19
及後 有公 格	O POPULATION OF THE PROPERTY O	0.9806 0.8459 116060 11.0000 0.9976
Back Lit	1,0000 (41%8 1,0000 8518 1,0000 851 0,0484 (45:89 1,0000 85:89	op 記載する
1 5 TO 1		
2.2	三条 经分类	医多种种性心管
1300 H 251	的表面分裂的	できるあるだめ
	00000000	
OPERIN ercial Industrial Factor Hatio % Factor	1.0000 50.00 1.0000 44.48 1.0000 44.48 1.0000 44.48 1.0000 4.00000 4.0000 4.0000 4.0000 4.0000 4.0000 4.0000 4.00000 4.00000 4.00000 4.00000 4.00000 4.00000 4.00000	0.9504 50.99 1.0948 59.11 0.9548 59.70 1.0900 19.25 0.9548 56.07
2 T	三十二十二十二十二二十二二二二二二二二二二二二二二二二二二二二二二二二二二二	A CONTRACTOR OF THE PARTY
147	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.95 P.0 0.95 P.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
11170000	ON DIVIDED	முற்றதும்ற
1 5 TO 100	O^{∞} or O or O	(D C (D) (C) (D (D) (C)
O . 5. 14	中央制作中的	O TO TO O
正真家	2.0	
三元/ [4]		2 X 26 25 10 10
一点の話	のおおかののは従	52.61 52.55 52.53 53.75
图多量	のめならっから	0.00 to 0.00
REAL PI Comfr Ratio	8887288 84488	52.61 45.67 65.22 55.23 52.53 53.75
45	88.27.288 88.28.988	
	5 66 6 6 6 6 6 6 6	88866
300 A A A	名智用的 含含色面	多名西岛 夏夏
-		Aber a darker to proper to the second policy of the last

sparbantages of assossed valuations to true bash value as determined by a survey of morational assessments. to bring the Rains to the required 50% of estimated inte cash value

e and subject to change as the result of possible adjustments by movingual assessing officers. Assuming that no may be applied to each individual valuation.

ACE THOSE OF 2010 AND ARENIGT AND OTHORITO OR SUBIFIACTION FROW THE

A Vames Lenton Mackinac Comby Equalization Director